

Notice of Allowability

Application No.

10/648,966

Examiner

Tonia L. Meonske

Applicant(s)

ARNOLD ET AL.

Art Unit

2181

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed December 20, 2006.

2. ☒ The allowed claim(s) is/are 1, 3-5, 8-9, 12-13, 16 and 20-32.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date APRIL 7, 2006

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____.

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed on December 20, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent 6,715,060 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Allowable Subject Matter

2. Claims 1, 3-5, 8-9, 12-13, 16 and 20-32 are allowed.

3. The following is an examiner's statement of reasons for allowance:

a. Referring to claim 1, the prior art of record has not taught or suggested "a multi-bit scoreboard register having a second bit indicative of a speculative state of said one instruction, said scoreboard further configured to control said second bit based on whether an instruction for reading data retrieved by said pending write has been detected during said pending write", in combination with the plurality of pipelines and scoreboard as claimed.

b. Referring to claim 8, the prior art of record has not taught or suggested "updating one of said multi-bit scoreboard registers based on each of said detecting steps such that said one multi-bit register indicates an existence of a pending write associated with said one instruction and a speculative state of said one instruction, said speculative state based on said detecting said pending instruction for reading said data step", in combination with the claimed providing, processing, detecting steps as claimed.

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- c. Referring to claim 21, the prior art of record has not taught or suggested "the second bit in the scoreboard indicates whether said pending write may be cancelled, and wherein said system further comprises circuitry configured to cancel said pending write based on said second bit", in combination with the plurality of pipelines and scoreboard as claimed.
 - d. Referring to claim 22, the prior art of record has not taught or suggested "canceling a retired instruction based on said multi-bit register", in combination with the providing, processing, detecting and updating steps as claimed.
 - e. Referring to claim 23, the prior art of record has not taught or suggested "a scoreboard indicative of which of a plurality of registers are associated with pending writes induced by retired instructions, said scoreboard comprising data indicative of which of said retired instructions may be canceled; and circuitry configured to cancel at least one of said retired instructions based on said data", in combination with the plurality of pipelines and scoreboard as claimed.
 - f. Referring to claim 27, the prior art of record has not taught or suggested "updating a scoreboard such that the scoreboard indicates which of a plurality of registers are associated with pending writes induced by retired instructions", in combination with the two claimed updated steps and the claimed processing step.
4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

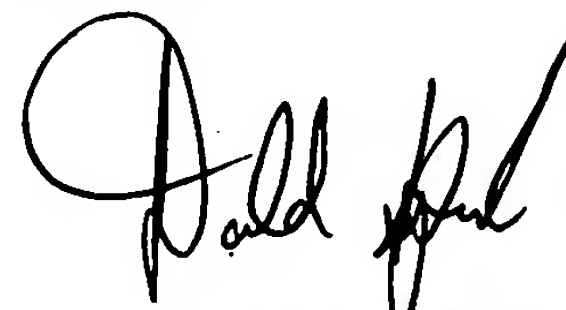
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tonia L. Meonske whose telephone number is (571) 272-4170. The examiner can normally be reached on Monday-Friday with first Friday's off.

6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TLM



DONALD SPARKS
SUPERVISORY PATENT EXAMINER